

WHAT IS CLAIMED IS:

1. A door for a vehicle comprising:

a door beam;

an inner frame having a section of C shape; and

5 a lower frame, extending in a longitudinal direction of the vehicle and forming a closed section with an outer panel.

2. A door for a vehicle comprising:

10 a door beam;

an inner frame having a section of C shape; and

a lower frame, extending in a longitudinal direction of the vehicle and forming a closed section with an outer panel, wherein

15 a front frame member arranged on the front side of the vehicle and a rear frame member arranged on the rear side of the vehicle are connected by the inner frame and the lower frame.

20 3. A door for a vehicle comprising:

a lower frame arranged in a lower portion of the door body, extending in the longitudinal direction of the vehicle;

an outside plate for forming a surface of the vehicle body, arranged outside of the lower frame; and

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an outer panel having an inside plate folded back at a lower end portion of the outside plate, the inside plate extending to the inside of the vehicle of the lower frame, wherein

5 the lower frame and the outer panel are joined to each other to form a closed cross section in a lower portion of the door body.

4. A door for a vehicle comprising:

10 a door body including a front frame member arranged on the front side of the vehicle, a rear frame member arranged on the rear side of the vehicle and a lower frame for connecting the front frame member with the rear frame member; and

15 an outer panel including an outside plate for forming a surface of the vehicle in the lower frame outside of the vehicle and an inside plate folded back at a lower end portion of the outside plate, the inside plate extending to the inside of the vehicle of the lower frame, wherein

20 the lower frame and the outer panel are joined to each other to form a closed cross section in a lower portion of the door body.

5. The door for a vehicle according to claim 3, wherein
the lower frame includes an inside flange fixed to the
inside plate and an outside flange connected to the outside
plate to be relatively displaced with respect to the
5 outside plate.

6. The door for a vehicle according to claim 4, wherein
the lower frame includes an inside flange fixed to the
inside plate and an outside flange connected to the outside
10 plate to be relatively displaced with respect to the
outside plate.

7. The door for a vehicle according to claim 5, wherein
the outside flange is connected to the outside plate
15 by an adhesive sealing member.

8. The door for a vehicle according to claim 6, wherein
the outside flange is connected to the outside plate
by an adhesive sealing member.

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9. The door for a vehicle according to claim 3, wherein
the inside flange extends upward along the inside
plate.

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10. The door for a vehicle according to claim 4, wherein
the inside flange extends upward along the inside
plate.

5 11. The door for a vehicle according to claim 3, wherein
the outer panel is formed by press forming.

12. The door for a vehicle according to claim 4, wherein
the outer panel is formed by press forming.

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13. A door for a vehicle comprising:

an inner frame arranged in a door body inside the
vehicle, extending in the longitudinal direction of the
vehicle, wherein

15 the inner frame includes an opening, the cross section
of which is a substantial C-shape, extending in the
longitudinal direction, and is arranged in the door body so
that the opening can be directed outside the vehicle.

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14. A door for a vehicle comprising a door body,

the door body including: a front frame member arranged on the front side of the vehicle; a rear frame member arranged on the rear side of the vehicle; and an inner
5 frame for connecting the front frame member with the rear frame member inside the vehicle, wherein

the inner frame includes an opening, the cross section of which is a substantial C-shape, extending in the longitudinal direction, and is arranged in the door body so
10 that the opening can be directed outside the vehicle.

15. The door for a vehicle according to claim 13, wherein

the inner frame includes a pair of flanges extending from the upper and the lower portion of the inner frame
15 toward the inside of the opening, and

the width of each flange in the vertical direction is set at $1/4$ to $1/2$ of the width in the vertical direction of the base portion which forms the portion, the cross section of which is formed into a C-shape.

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16. The door for a vehicle according to claim 14, wherein

the inner frame includes a pair of flanges extending from the upper and the lower portion of the inner frame toward the inside of the opening, and

the width of each flange in the vertical direction is set at $1/4$ to $1/2$ of the width in the vertical direction of the base portion which forms the portion, the cross section of which is formed into a C-shape.

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17. The door for a vehicle according to claim 13, wherein the width of the inner frame in the width direction of the vehicle is set at $1/6$ to $1/1$ of the width in the vertical direction of the base portion which forms the portion, the cross section of which is formed into a C-shape.

18. The door for a vehicle according to claim 14, wherein the width of the inner frame in the width direction of the vehicle is set at $1/6$ to $1/1$ of the width in the vertical direction of the base portion which forms the portion, the cross section of which is formed into a C-shape.

19. The door for a vehicle according to claim 13, wherein a connecting portion of connecting the side of the inner frame inside the vehicle with upper and lower leg portions extending from the upper and lower end portions of the side toward the outside of the vehicle is formed being curved.

20. The door for a vehicle according to claim 14, wherein
a connecting portion of connecting the side of the
inner frame inside the vehicle with upper and lower leg
portions extending from the upper and lower end portions of
5 the side toward the outside of the vehicle is formed being
curved.